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10/772,625	02/05/2004	James Owen	BEAS-01483US0	5660

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EXAMINER	
SYED, FARHAN M	
ART UNIT	**PAPER NUMBER**
2165	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/772,625	OWEN ET AL.	
	Examiner	Art Unit	
	Farhan M. Syed	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 February 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ~~20040905; 20041020~~. 9/8/04 ; 11/3/05 ; 2/13/06 + 6/21/06 10/20/04 2/7/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-39 are pending.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 3, items 300 and 312; Figure 8, item 800; Figure 9, item 900; Figure 10, item 1000; and Figure 11, item 102 (SPI). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 4, 13, 19-21, 28, and 34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims recite "set of services" which is not described in the Applicant's disclosure.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 5, 8, 9, 12, 14, 17, 18, 26, 27, 30, 31, and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. These claims are an omnibus type claims.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 30 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. This claim clearly recite a "computer data signal embodied in a transmission medium", which may "take the form of electrical, magnetic, or optical signals capable of being stored, transferred, combined, and otherwise manipulated through electrical and/or optical components of a process and its subsystems" (Applicant's specification, paragraph [0029]). However these computer data signals are not tangible, and cannot tangibly embody a computer program or process since a computer cannot understand/realize (i.e. execute) the computer program or process when embodied on the data signal. Computer program or processes are only realized within the computer when stored in a memory or storage element (such as RAM or ROM). Therefore, a data signal does not meet the "useful, concrete, and tangible" requirement as set forth in State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02, and hence claims 25-32 are non statutory under 35 U.S.C. 101. For a further explanation of the use of signals and carrier waves, the Examiner refers to the Interim Guidelines accessible online at

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Shutt et al (U.S. Patent No. 7,058,958 and known hereinafter as Shutt).

As per claims 1, 10, 19, 29, 30, and 31, Shutt teaches a method for providing content to a content repository, comprising: providing a process operable to interact with a virtual content repository (VCR) (i.e. *"A configuration database 260 is accessed by the client programming model 210 and provides the topology of the various data servers 250 and databases 255 to the client programming model 210. The client programming model 210 wraps the databases 255, 260 as a virtual database virtual database 230. In other words, the model 210 views the application data servers 250 and configuration servers 265 as one virtual database with multiple databases 255, 260 hidden behind it. The virtual database 230 of the present invention can be divided up between different data centers and different switches, as described further with respect to FIG. 3." "The administration console 220 is in communication with the configuration database(s) 260, and retrieves the topology from the configuration database(s) 260, which are served by configuration server(s) 265."* The preceding text

clearly indicates that the process operable is the client programming model that interacts with a virtual content repository, which is a virtual database.)(Column 6, lines 14-23 and lines 30-33) and capable of communicating with the VCR using a computer network (i.e. *"The computer 110 may operate in a networked environment using logical connections to one or more remote computers, such as a remote computer 180. The remote computer 180 may be a personal computer, a server, a router, a network PC, a peer device or other common network node, and typically includes many or all of the elements described above relative to the computer 110, although only a memory storage device 181 has been illustrated in FIG. 1."* The preceding text clearly indicates that a computer network is the network environment where remote computers can communicate with a VCR, which is an instance of a server, where a database resides on. An ordinary person skilled in the art understands that a VCR resides on a database, in which a database resides on a server.)(Column 5, lines 6-13); providing a mechanism for the process to interact with the VCR (i.e. *"An example of a method in accordance with the present invention is described with respect to FIG. 4. At step 400, an application (or API, for example) (referred to herein as a client application) instantiates the client programming model."* The preceding text clearly indicates that the mechanism for the process to interact is the API used to interact with a VCR, which is contained in the client programming model.)(Column 7, lines 63-67); identifying a first content (i.e. *"At step 410, the client application requests initialization of a particular second application, such as, for example, a virtual database, a request for data, or a request for a particular partition."* The preceding text clearly indicates that an instance of content, including the first content is a request for data or a request for a particular partition.)(Column 7, line 67; column 8, lines 1-3); associating a first schema with the first content (i.e. *"Using this configuration information, at step 430, the model creates local private data structures reflecting the logical to physical mapping of the data location and the association between replicas of the data. Along with this, a communication mechanism (e.g., TCP/IP port) is desirably opened to support remote administration."* The preceding text clearly indicates that an instance of a schema, including the first schema is the private data structures and contained in the private

data structures are data, which are contents.)(Column 8, lines 17-22); providing to the VCR at least one of: 1) the first content; 2) a reference to the first content; and 3) the first schema to the VCR (i.e. *"Using this configuration information, at step 430, the model creates local private data structures reflecting the logical to physical mapping of the data location and the association between replicas of the data. Along with this, a communication mechanism (e.g., TCP/IP port) is desirably opened to support remote administration."* The previous text clearly indicates that the logical to physical mapping of the data location is the VCR containing the at least first content, which is data contained in the data structure, a reference to the first content, which is contained in the configuration information, and the first schema, which is an instance of the private data structure.)(Column 8, lines 17-22); and wherein the VCR is operable to provide to the at least one content repository the at least one of: 1) the first content; 2) the reference to the first content; and/or 3) the first schema (i.e. *"At step 440, the model returns a handle/interface/object to the client application. The client application invokes a method on that interface/handle/object at step 450 to make a specific request to access data (e.g., SQL). The client application indicates the level of consistency and freshness of data that is desired by the request. The client application also indicates the logical data location. The request is then provided back to the model. At step 460, the model consults its private data structures to map the logical location to a physical location, and to determine which copies of data are candidates to satisfy the consistency required by the request. The model also determines which of those copies of the data are in a healthy enough state to be accessed."* The preceding text clearly indicates that the VCR, which contains information in the logical location is operable, which is the ability to satisfy the client application request.)(Column 8, lines 23-36).

As per claims 2, 11, and 32, Shutt teaches a method wherein: the mechanism for interacting with the VCR includes an Application Programming Interface (API) (i.e. *"An example of a method in accordance with the present invention is described with respect to FIG. 4. At step*

400, an application (or API, for example) (referred to herein as a client application) instantiates the client programming model.") (Column 7, lines 63-66).

As per claims 3, 12, and 33, Shutt teaches a method wherein: the VCR integrates the at least one content repository into a logical content repository (i.e. *"In the configuration database 260, there is a mapping of the logical partitions ranges to the physical partitions (which is a list of servers and databases)."*)(Column 6, lines 35-39).

As per claims 4, 13, and 34, Shutt teaches a method wherein: each one of the at least one content repositories exposes a first set of services to enable its integration into the VCR (i.e. *"In other words, the model 210 views the application data servers 250 and configuration servers 265 as one virtual database virtual database with multiple databases 255, 260 hidden behind it. The virtual database 230 of the present invention can be divided up between different data centers and different switches, as described further with respect to FIG. 3. It is contemplated that servers 250 can reside in multiple data centers." "The configuration database(s) 260 preferably contains the topology of the data servers 250 and databases 255 (i.e., how the data servers are laid out and related to each other). In the configuration database 260, there is a mapping of the logical partitions ranges to the physical partitions (which is a list of servers and databases)."*)(Column 6, lines 17-26 and lines 32-39).

As per claims 5, 14, 27, and 35, Shutt teaches a method wherein the step of identifying the first content includes: traversing a file system and/or a website (i.e. *"There is a multi-master write with a variable number of replicas. There is automatic failover of writes and reads. The application provides conflict resolution logic. In this manner, for example, write database 1 is associated with server 1 and writes to write databases 1' associated with servers 2 and 3. Similarly, write*

database 1' associated with server 2 writes to write database 1' associated with server 3 and write database 1 associated with server 1.")(Column 10, lines 42-53).

As per claims 6, 15, 26, and 36, Shutt teaches a method wherein the step of identifying the first content includes: extracting properties from one of: 1) a file; 2) a hypertext markup language (HTML) document; and 3) an Extensible Markup Language (XML) document (i.e. *"Managed code uses the .NET Framework's common type libraries and its metadata "blueprints" for managing components. Managed code means that there is a defined contract of cooperation between natively executing code and the runtime itself. Managed code is written in the language of choice with its own syntax and type rules and its own compiler to map this syntax to the common language runtime, so varying language programming conventions yield identical class behavior.")*(Column 11, lines 1-9).

As per claims 7, 16, and 37, Shutt teaches a method wherein the step of associating the first schema with the first content includes: acquiring the first schema from at least one of: 1) a file; 2) a hypertext markup language (HTML) document; and 3) an Extensible Markup Language (XML) document (i.e. *"The client programming model of the present invention can be used in conjunction with a .NET data provider for managed code clients and front end applications which will thinly wrap the SQL Server .NET data provider while providing the additional benefits of the infrastructure (e.g., partitioning abstraction, and automatic command failover support, server connection validation, stale replica detection, etc.).")*(Column 11, lines 10-16).

As per claims 8, 17, and 38, Shutt teaches a method wherein the step of providing the first content and/or the first schema to the VCR includes: persisting in the

at least one content repository the at least one of: 1) the first content; 2) the reference to the first content; and/or 3) the first schema (i.e. *"The client programming model of the present invention can be used in conjunction with a .NET data provider for managed code clients and front end applications which will thinly wrap the SQL Server .NET data provider while providing the additional benefits of the infrastructure (e.g., partitioning abstraction, and automatic command failover support, server connection validation, stale replica detection, etc.)."*)(Column 11, lines 10-16).

As per claims 9, 18, and 39, Shutt teaches a method wherein the step of providing the first content and/or the first schema to the VCR includes: preserving in one of the at least one content repositories hierarchical relationships between the first content and other content in the VCR (i.e. *"Also shown above each server 250 in FIG. 5 (and in FIG. 6) is a representation of the physical partitions 251. In partitions 251, different ranges of hashes are shown. These hashes represent an additional (optional) layer of logical to physical mapping. When present, this mapping is used in the rebalancing of data when adding servers to scale-out. Other techniques can be used to determine partitions and add replicas. For example, the application can supply physical partitions to the client programming model by any technique, such as looking it up in a stored mapping or a determined mapping."*)(Column 8, lines 60-67).

As per claim 20, Shutt teaches a system further comprising: at least one second process operable to interact with the first process; wherein the at least one second process is operable to provide to the first process the at least one of: 1) content; 2) a reference to the content; and 3) a schema corresponding to the content; and a third set of services operable to enable interaction between the at least one second process and the first process (i.e. *"Using this configuration information, at step 430, the model creates local private*

data structures reflecting the logical to physical mapping of the data location and the association between replicas of the data. Along with this, a communication mechanism (e.g., TCP/IP port) is desirably opened to support remote administration.")(Column 8, lines 17-22).

As per claims 21 and 23, Shutt teaches a system wherein: the third set of services provides a first function for directing the at least one second process to extract at least one property from the content (i.e. *"The model then determines the appropriate server to fulfill the client application's request, as described in further detail below. At step 420, the model receives this request from the client application and looks up a particular partition for the client application (or API). In this manner, the model gets a request, and the determines which server and/or database to use, based on the mapping. More particularly, the model reads configuration information from a known location. For example, configuration information is retrieved from a set of centralized configuration databases (e.g., databases 260 in FIG. 2) whose location is indicated in an .ini file (e.g., .ini file 245 in FIG. 2) or registry setting. An alternative implementation could store the information locally."*)(Column 8, lines 4-16); and wherein a property is an association between a name and a value (i.e. *"Using this configuration information, at step 430, the model creates local private data structures reflecting the logical to physical mapping of the data location and the association between replicas of the data. Along with this, a communication mechanism (e.g., TCP/IP port) is desirably opened to support remote administration."*)(Column 8, lines 17-22).

As per claims 22 and 24, Shutt teaches a system wherein: the at least one second process can derive the schema from the content (i.e. *"Using this configuration information, at step 430, the model creates local private data structures reflecting the logical to physical mapping of the data location and the association between replicas of the data. Along with this, a*

communication mechanism (e.g., TCP/IP port) is desirably opened to support remote administration.")(Column 8, lines 17-22).

As per claim 25, Shutt teaches a system further comprising: at least one second process operable to locate the schema corresponding to the content (i.e. *"More particularly, the model 210 reads the topology from the configuration database 260, so the model 210 can later determine the state of the application data servers/database (i.e., the virtual database 230 that comprises the multiple switches 300 and database servers 250). From this information, the model 210 determines the data servers/databases 250, 255 that the client application 200 should access to retrieve the requested data. Thus, based on the topology and the state of data servers/databases 250, 255, the model 210 routes the client application 200 to a data server/database 250, 255 that has the requested data and is in a "healthy" state."*)(Column 7, lines 44-55).

As per claim 28, Shutt teaches a system wherein: the first set of services and the second set of services share a content model (i.e. *"More particularly, the model 210 reads the topology from the configuration database 260, so the model 210 can later determine the state of the application data servers/database (i.e., the virtual database 230 that comprises the multiple switches 300 and database servers 250). From this information, the model 210 determines the data servers/databases 250, 255 that the client application 200 should access to retrieve the requested data. Thus, based on the topology and the state of data servers/databases 250, 255, the model 210 routes the client application 200 to a data server/database 250, 255 that has the requested data and is in a "healthy" state."*)(Column 7, lines 44-55).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhan M. Syed whose telephone number is 571-272-7191. The examiner can normally be reached on 8:30AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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FMS